

FIG. 1 is a block diagram of a network system 10. The system 10 includes a central office 15, a group of end nodes 20, and a group of remote nodes 25. The central office 15 includes a communication switch 30 and a switching fabric 55. The communication switch 30 includes a plurality of OSAs 35, 40, and 45. The switching fabric 55 is connected to the OSAs 35, 40, and 45. The end nodes 20 are connected to the OSAs 35, and the remote nodes 25 are connected to the OSAs 40. The OSAs 45 are connected to the switching fabric 55.

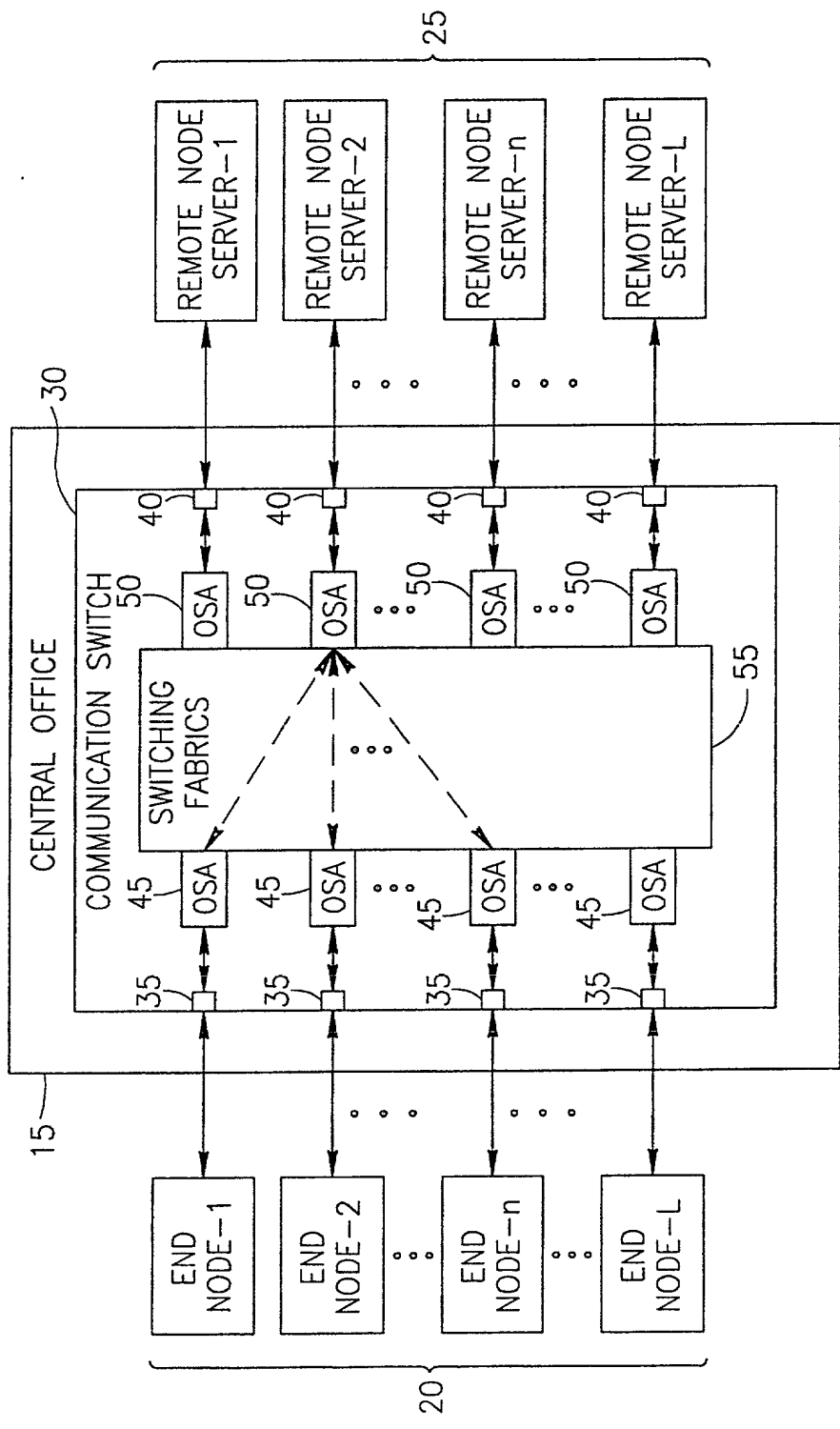


FIG.1

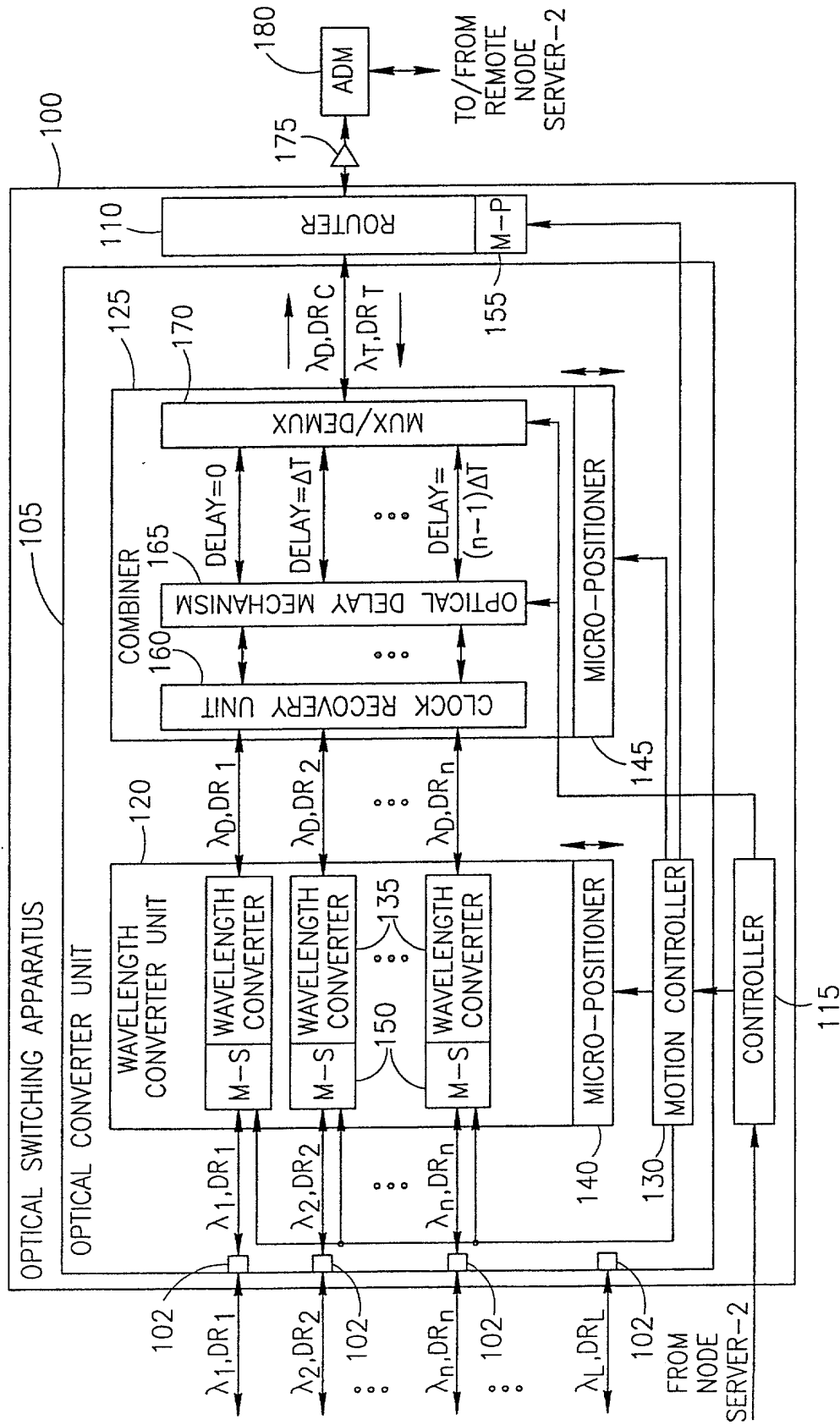


FIG.2



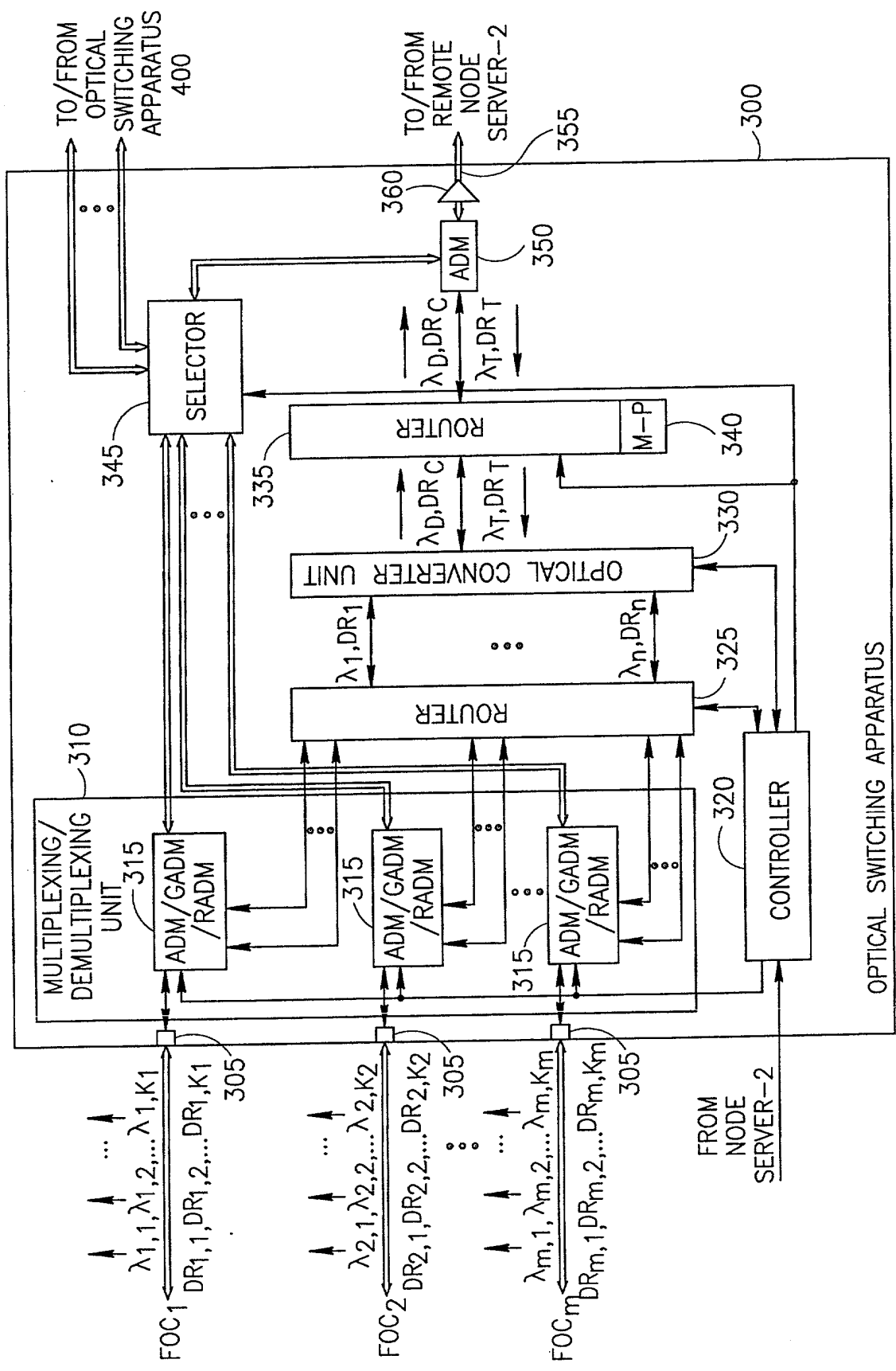


FIG.4

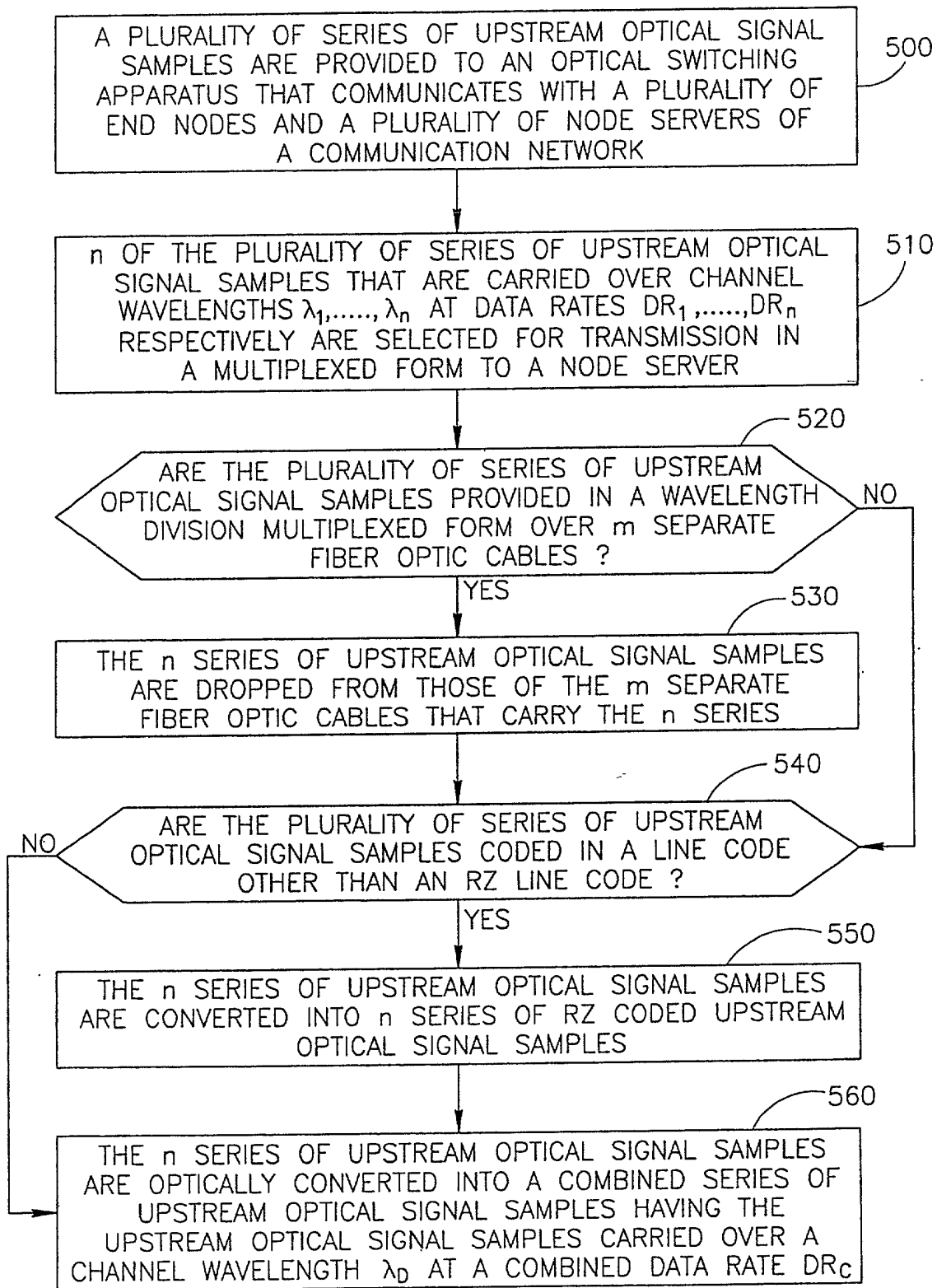


FIG.5A

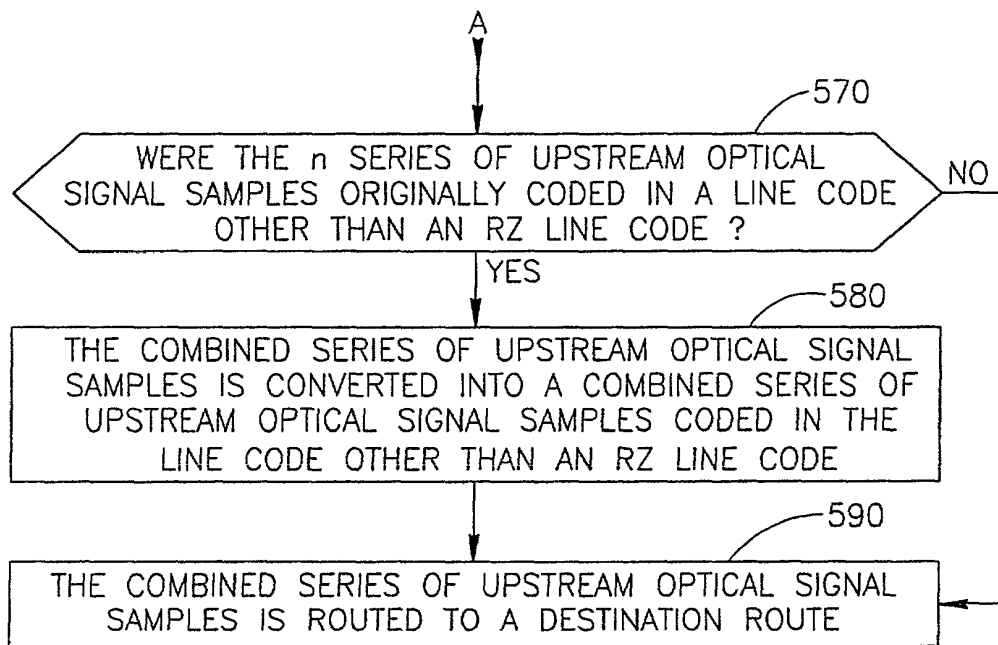


FIG.5B

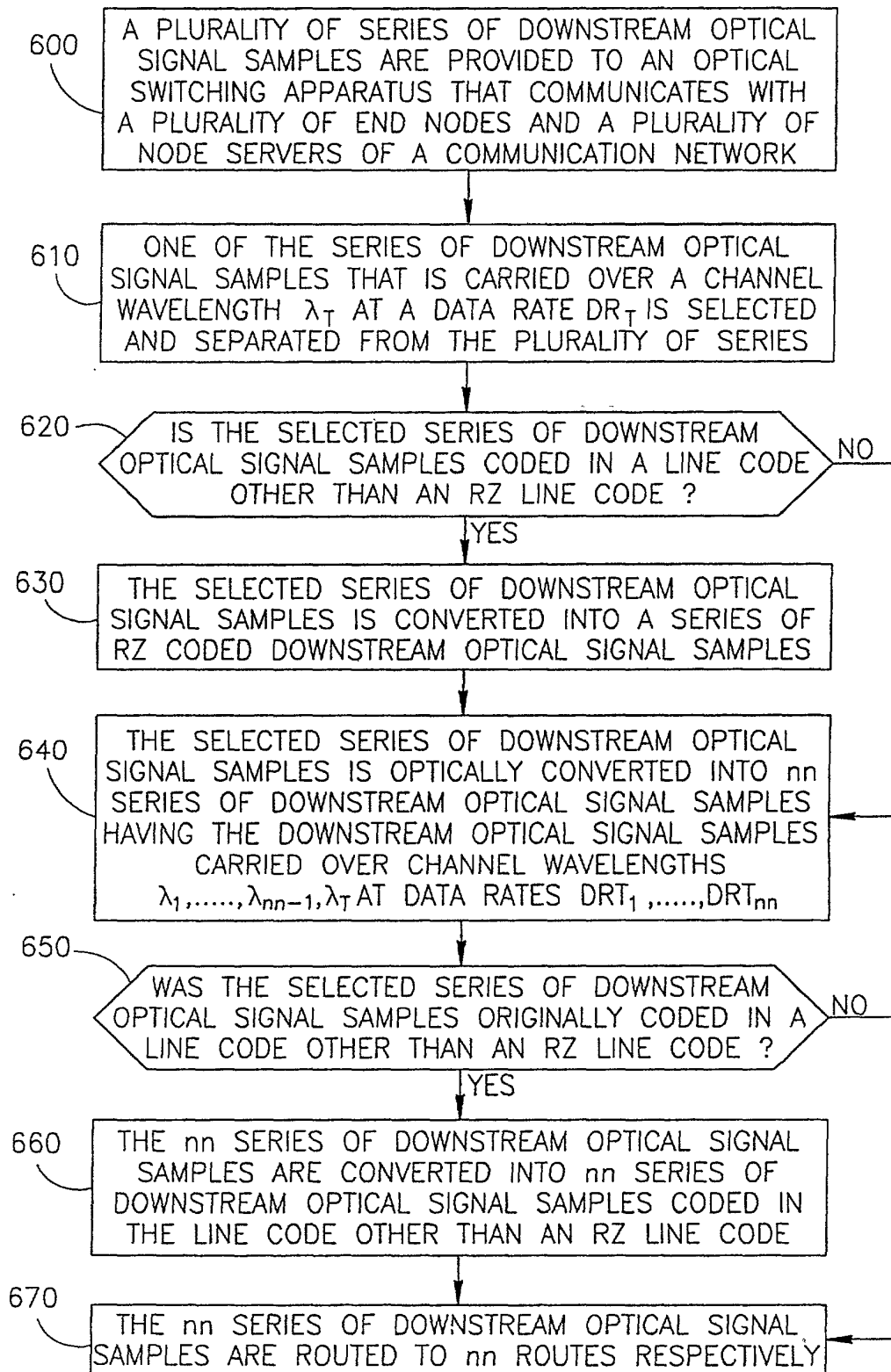


FIG.5C